User's Manual

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1. GUIDE

1.1 IMPORTANT SAFETY INSTRUCTIONS

Thank you for choosing our product. Before installation, we would like to remind you some notes, which is very important for operating safely and properly, as follows:

- Be sure to read this user manual before starting your operation.
- You must install the dish with correct direction and angle. If the dish is not working properly, contact your local dealer.
- When the unit is suddenly moved to a hot area from a cold area, it may cause some problems. In that case, turn off the power, and turn on again after 1-2 hours.
- Keep meter placed in clean space with sufficient ventilation.
- Do not cover the meter with or place it on a unit that emits heat.
- Clean the case by a soft cloth with a little washing liquid.
- Do not remove the cover.
- Do not let the unit exposed to extreme heat, cold or humid conditions.
- No liquids or any other materials to come inside of the unit.

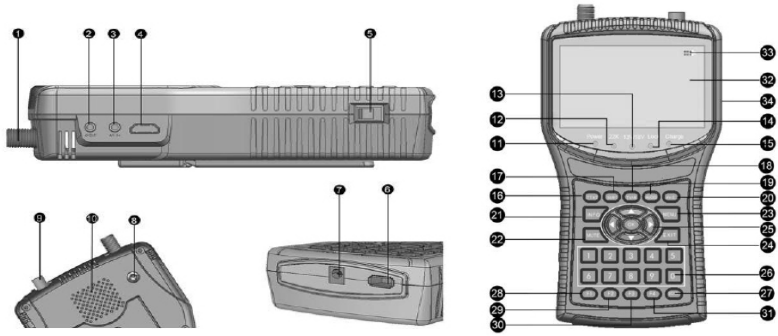
1.2 UNPACKING

Open the package and make sure it includes all below items, if any missing, please contact the reseller for replacement.

1. Digital Satellite Meter
2. User's manual
3. AV cable
4. Car charger cable
5. Power Adaptor
6. Strap of carrying case
7. DC 12V connect line

NOTE: Please refer to our actual configuration.

1.3 PRODUCT OVERVIEW& ILLUSTRATION

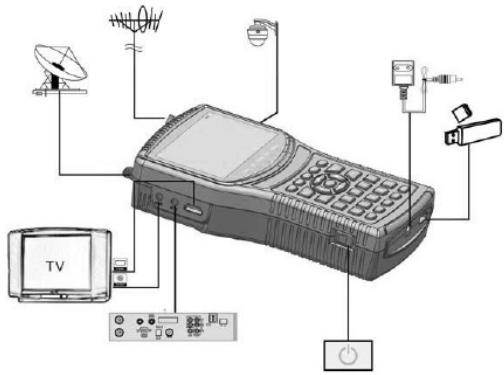


NO	Description	FUNCTION
1	LNB In	Connect to satellite antenna cable
2	AV OUT	Connect to AV port for TV
3	AV IN	Connect to AV port for meter
4	HDMI	Use HDMI cable to connect for TV
5	Power Switch	Turn on/off meter
6	USB Port	Connect to USB memory
7	DC Slot	Connect to adaptor input
8	Torch LED	Night lighting
9	ANT IN	Connect to antenna of DVB-T/T2 signal
10	Speaker	Speaker integrated
11	Power	Power indicator light
12	22kHz	22kHz indicator light
13	13V/18V	Vertical /Horizontal polarization voltage output light
14	LOCK	Signal lock indicator light
15	Charger (Note1)	Charger indicator light
16	Red & TTXT	Red KEY &Teletext interface
17	Green & SUBT	Green key & Subtitle interface
18	Orange &TV/R	Orange key & TV and radio switch
19	BLUE &AUDIO	Blue key & Audio interface
20	AV-S	If we connect AV IN; switch AV in/out for LCD and speaker
21	INFO	INFO key

NO	Description	FUNCTION
22	MUTE	MUTE
23	MENU	Show the main menu on the screen or jump back to previous menu in sub-menu setting conditions
24	EXIT	Escape from present menu and save the settings
25	NEVIGATION KEY	Volume Control or move cursor, channel or change, confirm etc
26	0-9	Number key to select channels or enter programming
27	SCAN	“Quick Search” shortcut key
28	F1	Auxiliary function key
29	F2	Auxiliary function key
30	F3	Auxiliary function key
31	F4	Auxiliary function key
32	LCD	TFT LCD Screen
33	[illegible]	When power on the meter ,displays the battery level
34	DC 12V OUTPUT	DC 12V output for extern equipment(Please in kind prevail)

Note1: When the battery charged sufficient, the charge indicator is going out. When the battery is insufficient, indicator flashing.

1.4 INSTALLATION OF METER



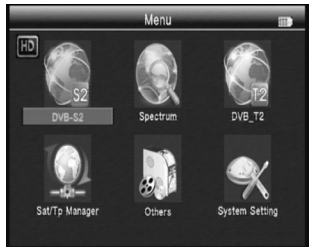
2. OUTLINE

- 4.3 Inch High Definition TFT LCD Screen
- Fully DVB-S/S2/T/T2, MPEG-2/MPEG4 compliant
- MPEG-2 / H.264 Hardware decoding
- Digital meter for signal strength and quality
- Constellation analyzer
- Spectrum analyzer
- Supports scan of Auto,Blind,Manual or NIT
- Sound and Light Alarm for Locking Signal
- Auto Calculate Angle of AZ ,EL
- Supports DISEQC 1.0/1.1/1.2 ,0/22kHz Tone
- Speaker Integrated
- Support both AV out and AV in
- LNB short protect
- 7.4V/3000mAh Li-Ion Battery Included
- Software upgrade via USB port
- Easy to carry

3. THE MENU OSD INSTRUCTION

If you have installed and connected the cables to the receiver, pressing **MENU** to display the Main Menu.

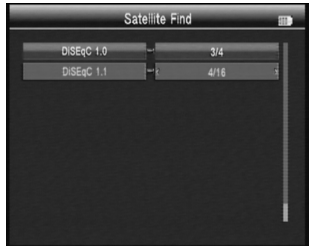
- DVB-S2
- Spectrum
- DVB-T2
- Sat/TP Manager
- Others
- System Setting



Press the keys of ▲▼◀▶ to move the cursor up or down in the menu interface, then use **OK** to confirm a selection.

3.1 DVB-S2

Select DVB-S2, then press **OK** into the Satellite Find.

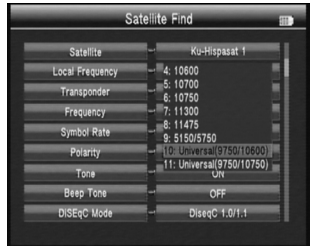


3.1.1 SATELLITE

Press ◀▶ key into the satellite list. Use ▲▼ key to move the cursor, then press **OK** to select the satellite of you want.

3.1.2 LOCAL FREQUENCY

Press ◀▶ key into the LNB list. Use ▲▼ key to move the cursor then press OK to select the LNB of you want.



3.1.3 TRANSPONDER

Press ◀▶ key into the TP list. Use ▲▼ key to move the cursor then press OK to select the TP of you want.

3.1.4 FREQUENCY

Frequency of the current transponder, Input the value by using the number keys.

3.1.5 SYMBOL RATE

Symbol rate of the current transponder, Input the value by using the number keys.

3.1.6 POLARITY

Press ◀▶ key to change vertical or horizontal of polarization.

3.1.7 TONE

Press ◀▶ key to turn on or off 22kHz TONE Switch.

3.1.8 BEEP TONE

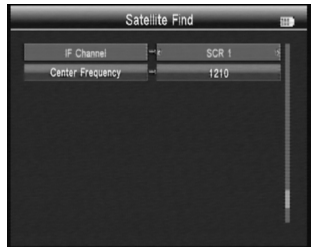
Press ◀▶ key to Switch beep tone. If we open the beep tone, the beep of lock alarm will open when we enter into the search screen.

3.1.9 DISEQC MODE

Press ◀▶ key to set the type of port as diseqc1.0/1.1 or Unicable.

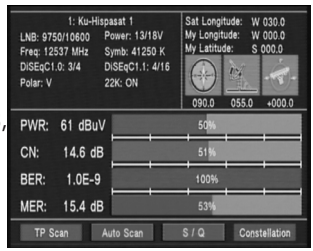
3.1.10 DISEQC TYPE & INPUT

If we select diseqc1.0/1.1, we can press ◀▶ key to set the port number. If select Unicable, we can press ◀▶ to select IF Channel, and use number key to input Center Frequency.



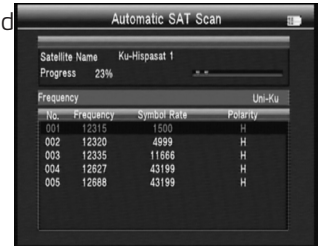
3.1.0.1 Quick Search

In the Satellite Find interface, you can press OK to enter the quick search.
If you have set the Longitude and Latitude under the system setting, the angle of LNB, the orientation and elevation of antenna all will be displayed on the screen.



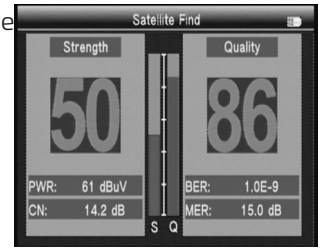
- TP Scan: Press the red key to search the current TP.

- Auto Scan: Press the green key to auto blind search the current satellite



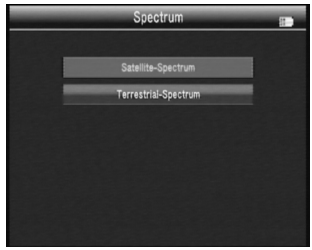
- S/Q: Press the orange key to enlarge showing of the signal strength and quality.

- Constellation: Press the blue key into the constellation.



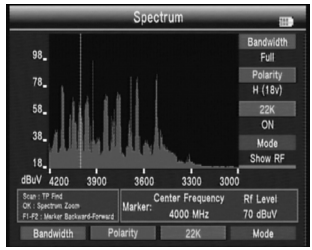
3.2 SPECTRUM

- **SATELLITE-SPECTRUM**
- **TERRESTRIAL-SPECTRUM**



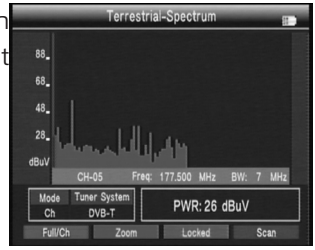
3.2.1 SATELLITE-SPECTRUM

Press ◀▶ key to change Frequency;
Press red key to change bandwidth;
Press green key to change vertical or horizontal of polarization;
Press orange key to switch 22K on or off;
Press blue key to change mode Show IF or RF.

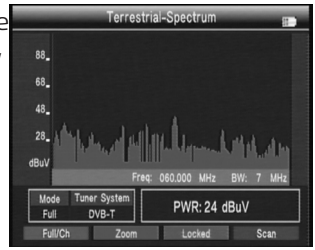


3.2.2 TERRESTRIAL-SPECTRUM

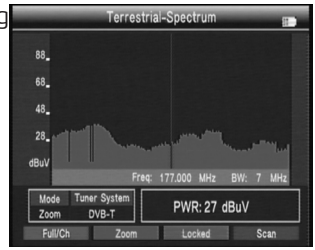
When we enter into this interface, we can press ◀▶ key to scan some information about spectrum in different frequency point.



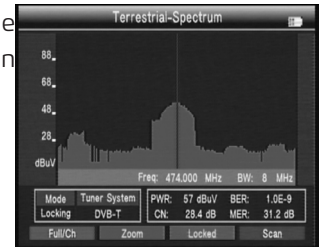
- Full/Ch: Press red key to make all the frequency points we can see on the window or to make some frequency points on it.



- Zoom: Press green key to enlarge showing the point you current select, and press again it will be back.



- Locked: Press orange key to lock all the current frequency points, and remain unchanged unless you press again.



- Scan : When the frequency points have been locked, you can press blue key to receive signal on a point.

3.3 DVB-T2

Select DVB-S2, then press OK into the Scan Setup.

3.3.1 COUNTRY SETTING

Press ◀▶ key to change the default country.

3.3.2 CHANNEL NO

Press ◀▶ key to change the channel number

3.3.3 FREQUENCY

Frequency of the current channel, input the value by using the number keys.

3.3.4 BANDWIDTH

Press ◀▶ key to change the bandwidth, we can select 5, 6, 7 or 8M.

3.3.5 MODE

Press ◀▶ key to change the DVB standard, we have there types including T/T2/T+T2, you can select one you want.

3.3.6 BEEP TONE

Press ◀▶ key to switch beep tone. If we open the beep tone, the beep of lock alarm will open when we enter into the search screen.

3.3.7 ANTENNA SETTING

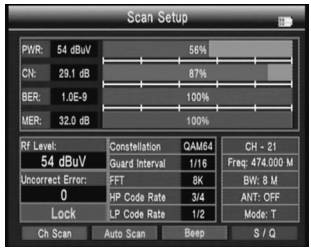
Press ◀▶ key to change the antenna power, we have there types including 5V/12V/17V, you can select one you want.

3.3.8 ANTENNA SETTING

Press ◀▶ key to power on or off the antenna.

3.3.0.1 Quick Search

In the Channel Find interface, you can press OK to enter the quick search.



- Ch Scan: Press OK or red key to search current channel.

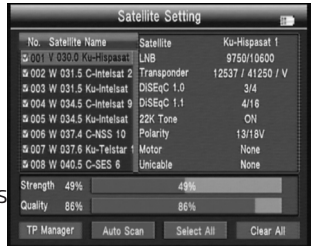
- Auto Scan: Press green key to auto search the current channel.
- Beep: Press orange key to open beep tone.
- Zoom: Press blue key to enlarge showing of the signal strength and quality.

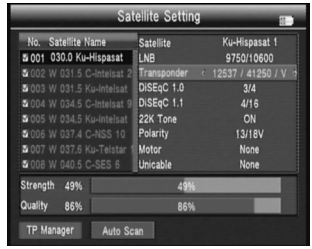
3.4 SAT/TP MANAGER

- Satellite Setting
- Auto Scan
- Transponder

3.4.1 SATELLITE SETTING

In the all Satellites Setting:
Press blue key to clear all selecte of satellite.
Press orange key to selecte all satellites.
Press green key into auto scan interface.
Press red key into the Transponder interface.
Press ▲▼ key to move the cursor, then press OK to change the satellite select or unselect.





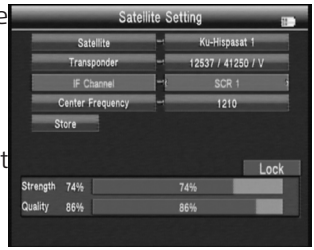
Press ◀▶ to set the single satellite setting.
In the setting interface:
1. TP Manage: press red key into TP manager.
2. Auto Scan: press green key into auto scan.
3. LNB: Press ◀▶ key then change the LNB frequency.
4. Transponder: Press ◀▶ key then change the current TP.
5. DiSEqc1.0: Press ◀▶ key to change the DiSEqC port.
6. DiSEqc1.1: Press ◀▶ key to change the DiSEqC port.
7. Motor: Press ◀▶ key to change the DiSEqC port.

If we select DiSEqC1.2/USALS, press OK into the motor interface.

- Transponder: Press OK to change the current tp.
- Mode: A, Position
  A1 Direction: Press ◀▶ key to move direction to west or east.
  A2 Position: Set the satellite save position.
  A3 Store: Save the satellite position to set of A2.
- Mode: B, Drive to Zero
  Move the cursor to G0, then press OK, the motor will go to zero.
- Mode: C, Drive to stored position
  Move the cursor to G0, then press OK, the motor will go to position of we have saved in mode A Position.
- Mode: D, Drive to Satellite
  Move the cursor to G0, then press OK, the motor will go to position of auto calculate.
- Mode: E, Recalculate
  E1 Direction: Press ◀▶ key to move direction to west or east.
  E2 Recalculate: Recalculate the satellite position.
- Mode: F, Set East Limit or Set west Limit
  Limit the motor move to east or to west.
  F1 Direction: Press ◀▶ key to move direction to west or east.
  F2 Store: Save the satellite position of A2
- Mode: G, Set Limit enable or disable
  Set the limit enable or disable.

8. Unicable: Press ◀▶ key to select Unicalbe then press OK into the Unicable setting.

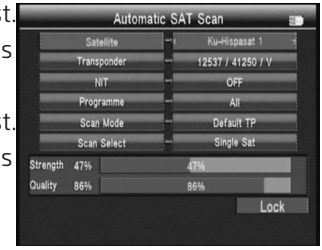
- Transponder: Press ◀▶ key to change the current TP.
- IF Channel: Press ◀▶ key to change SCR channel.
- Center Frequency: Use number key to input number.
- Store: Store the setting.



3.4.2 AUTO SCAN

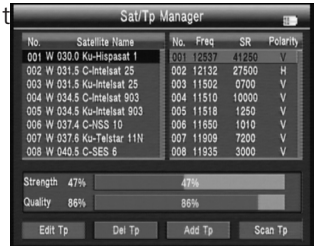
In the Sat/Tp Manager submenu, select Auto Scan into Automatic SAT Scan.

- Satellite: Press ◀▶ key into the satellite list. Use ▲▼ key to move the cursor, then press OK to select the satellite of youwant.
- Transponder: press ◀▶ key into the TP list. Use ▲▼ key to move the cursor, then press OK to select the satellite of you want.
- NIT: press ◀▶ key to switch network searcher on/off.
- Program: TV search type ALL/FTA.
- Scan Mode: scan mode select, we can select Default TP / One TP/Blind.
- Scan Select: scan all satellites of selected or the current satellite.



3.4.3 TRANSPONDER

In the Sat/Tp Manager submenu, select Transponder into Transponder.



Press ▲▼ key to select the current satellite.

• Edit Sat

Press red key to edit satellite.

NO.: Satellite number.

W-E: Switch the satellite longitude west or east.

Longitude: Use number key input value.

Satellite Name: Press OK will open the keyboard, use the direction key input satellite name.

• Del Sat

Press green key to delete satellite, then press OK to confirm or press MENU to cancel.

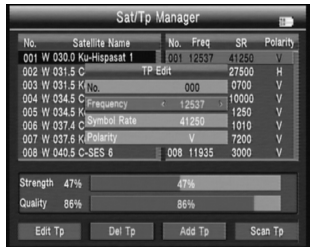
• Add Sat

Press orange key to add a satellite.

• Scan Sat

Press blue key into auto scan interface.

Press ◀▶ key to TP manager.



• Edit Tp

Press red key to edit TP.

NO.: TP number.

Frequency: Use number key input value.

Symbol Rate: Use number key input value.

Polarity: Press ◀▶ to change polarity.

• Del Tp

Press green key to delete TP, then press OK to confirm or press MENU to cancel.

• Add Tp

Press orange key to add a TP. Please refer to TP edit operations.

• Scan Tp

Press blue key into TP scan interface.

3.5 OTHERS

In the menu interface, select Others, then press OK into it.

3.5.1 CHANNEL

• S2<<>>T2

Press red key to switch DVB-S2 to DVB-T2, and press again returning to DVB-S2.

• Lock

Press ▲▼ key to the program that we want to lock or unlock, then press green key to lock or unlock the program. When we have dealt with all the programs need to be processed, press MENU, it will appear a comfirmation message. Then press OK to confirm the operation or select "x" by pressing OK to cancel.

• Del

Press orange key to select "Delete Select" or "Delete ALL".Press ▲▼ key to select the program that we want to delete, then press orange key, it will appear a "x" label on the program's right side. When we deal with all the programs need to be processed, press

MENU, it will appear a comfirmation message. Then press OK to confirm the operation or select "x" by pressing OK to cancel.

• Satellite

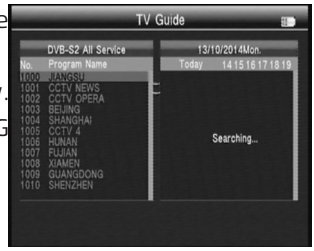
Press blue key then press ◀▶ key to select program list of the single satellite, or all satellite

3.5.2 PROGRAM INFO

In the Program Info we can check the information of the current TV.

3.5.3 EPG

Press ▲▼ key to change program. If the current program has EPG information, it will appear on the right side of the window. Press ◀▶ key to change the day of the EPG information.



3.5.4 MOVIE, MUSIC & PHOTO

Will need to play the files in the USB and insert it into the machine.

• Movie

Press red key to the mode option of play files and text encode, then press MENU return.

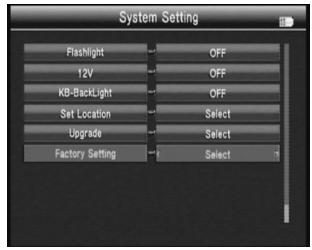
Press green key to change the folder file viewing to detailed list.

Press orange key to change mode to big Icon browsing.

Press the arrow keys to move the cursor, then press OK to enter the file.
In the play interface:
F1 Key: Normal play.
F2 Key: Pause.
F3 Key: Fast backward. Press F1 key return.
F4 Key: Fast forward. Press F1 key return.

• Music& Photo
Please refer to the Movie operating.

3.6 SYSTEM SETTING



• Country Setting
Press ◀▶ key to change the country
• OSD Language
Press ◀▶ key to change the OSD Language.
• TV Format
Press ◀▶ key to change the TV Format.
• Video Output
If we connect HDMI interface, we can press ◀▶ key.
• TV Resolution
On the basis of the Video Output choice, we can press ◀▶ key to change the TV resolution.
• Digital Audio Output
Press ◀▶ key to change the LPCM or RAW format.
• Time Zone
Press ◀▶ key to change the Time Zone.
• PWR Unit
Press ◀▶ key to change the PWR unit.
• Flashlight

Press ◀▶ key to switch Flashlight on/off.

• 12V

Press ◀▶ key to switch DC 12V output on/off.

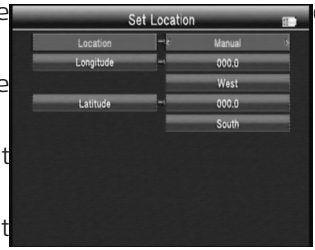
Note: If the shell is no 12V interface, without this feature

• KB-BackLight

Press ◀▶ key to switch delay time of back light.

• Set Location

Press ◀▶ or OK to set location longitude or latitude.



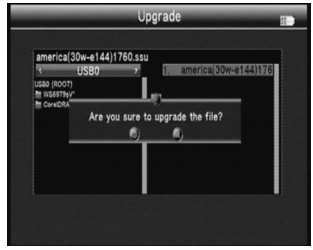
Location: we can press AB to change the city, then auto select longitude and latitude.

Longitude: we can use number key input value then select west or east.

Latitude: we can use number key input value then select south or north.

• Upgrade

Will update the file into the USB, then insert the machine. Press OK to update interface, use the direction key to select update file, and press OK to update.



Warning: Please don't turn power off or pull out the USB, otherwise it will damage the machine's software, and can't boot again.

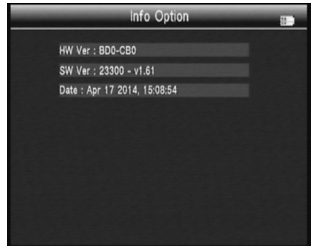
• Factory Setting

Press AB key, then press OK to confirm factory reset.

NOTE: if you set factory setting, all the user settings and the database will be reset.

• System Info

In the system setting, press INFO to check the system version.



4. TECHNICAL SPECIFICATION

TRANSMISSION STANDARDS	
DVB-S2/S, DVB-T/T2	
SATELLITE INPUT/DEMODULATION	
Connector Type	F Type
Input Frequency	950 to 2150 MHz
Signal Input Level	- 65 to -25 dBm
Band Switch Control	22KHz
LNB Supply	13V/18V, IMax 400mA
Demodulation Type	QPSK,8PSK,16APSK
Symbol Rate	2<Rs<45Mband(SCPC/MCPC)
DVB-T/T2 INPUT/DEMODULATION	
Connector Type	Female Type
Input Frequency	48 to 862 MHz
Signal Input Level	-79.5dBm (MAX)
ANT Supply	5V, 12V/17V Imax 100mA
Demodulation Type	QPSK,16QAM.64QAM,256QAM
LCD FEATURES	
LCD Type	TFT Transmissive
Number of Dots	480(RGB) x272
Active area (WxH)	95.04x53.86 mm2
AV output interface	
Connector Type	3.5 mm jack
Video Output	CVBS
Audio Output	Stereo Audio L/R output
HDMI output connecter	
Format	HDMI 1.3a
AV input interface	
Connector Type	3.5 mm jack
Video Input	CVBS
Audio Input	Stereo Audio L/R input
AUDIO/VIDEO PROCESSING	
Video decompression	MPEG-2 MP@HL, MPEG-1 Decoding,MPEG-4 ASP@L5 HD resolution,H.264 MP&HP@L4,HW JPEG decoding

Resolving rate	PAL-25 frame@720*576,NTSC-30 frame@720*480
Signal compatibility	Support conversion for different video formats
Video Format	4:3,16:9,By Pan & Scan and Letter Box conversion
Audio Decompression	MPEG-1 Layer I/II, MPEG-2 Layer I/II
Audio Output Mode	Stereo, Mono,R/L
DATA SERVICE PORT	
Connector	USB
Data Protocol	USB2.0 interface
File Management System	NTFS,FAT32,FAT16
File Format	wma,mp3,mp4,avi,jpg,jpeg,bmp,img
MICROPROCESSOR	
Microprocessor	NOVATEK
Clock Frequency	500MHz
SDRAM Memory	1Gbit DDR3
POWER SUPPLY	
Li-Ion Battery	7.4V/3000mAh(The machine behind labeling shall prevail)
Adapter	OUTPUT :DC12V/1.5A, INTUPT :100-240VAC 50/60Hz(Will be subject to actual configuration)
Power Consumption	Max. 10W
PHYSICAL CHARACERSTICS	
Size (W x D x H)	9.5x15.5x4.5(cm^3)
Net Weight	1kg

5. TROUBLE SHOOTING

Problem	Possible Causes	What To Do
No display light up	Power switch is not on Run out of batteries	Check to make sure power on. Even on adapter
No sound or picture, but the front panel power light is ON.	AV IN jack insert, but no video input	Pull out AV IN cable
No sound or picture	The satellite dish is not pointing at the satellite.	Adjust the dish. Check the Signal Level in the Antenna Setup Menu
Bad picture/Blocking Error	No signal or weak signal	Check the cable connections. LNB and other equipment connected between the LNB and the meter and adjust the dish.
	The satellite dish in not pointing at the satellite	Adjust the dish.
	Signal is too strong	Connect a signal attenuator to the LNB input
	Satellite dish is too small	Change to a larger dish
	LNB noise factor too high	Change to an LNB with lower noise factor
	The LNB is faulty	Change the LNB
AV out No picture(Video)	The system is connected by SCART cable and TV is not in AV mode.	Check the UHF channel fixed in your system and tune the UHF properly.
The key is not working	Out of battery	Even on adapter
	Key blocks	make sure no blocks between the front panel

AV cable

DC 12V connect line

Power Adaptor

Car charger cable

Strap of carrying case